DUAL INPUT AC/DC TO PROGRAMMABLE DC OUTPUT CONVERTER

ABSTRACT

A power converter capable of receiving either an AC input voltage or a DC input voltage and generating a programmable DC output voltage. The converter comprises a first circuit that converts an AC input voltage to a predetermined DC first output voltage, and a second circuit that converts a DC input voltage to a predetermined second DC output voltage. The converter also comprise a third circuit which is adapted to receive the first and second DC voltages from first and second circuits to generate a selectable output DC voltage. In selected embodiments, the first and second DC output voltages provided by the first and second circuits, respectively, are generally the same value and are coupled to a common node that feeds the input terminal of the third circuit. Moreover, the third circuit is adapted to provide a selectable output DC voltage which may be set higher or lower than its DC input voltage. The third circuit may also be adapted to couple a set of removable programming keys that provide for a different associated DC output voltage. The programming key comprises a resistor, which may provide for a variety of functions, such as current-limiting, over-voltage protection, output voltage programming, and wrong-tip circuit protection.